

Day-Brite



by Signify

Industrial

FBY LED High bay

12,000 to 60,000 lumens



LFA lens option shown



Control options available



Day-Brite / CFI FBY LED high bay provides versatility in form and function. With a wide range of lumen packages and accessories available, this luminaire can be used in many different applications ranging from warehouses and manufacturing facilities to retail outlets and school gymnasiums.

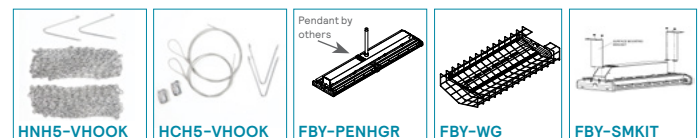
Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lumens: _____ Qty: _____
 Notes: _____

Ordering guide

Example: FBY24L840-UNV-LCA

Family	Lumens (nominal) ¹	Color Temperature	Voltage	Options
FBY	-	-	-	-
FBY	12L 12,000 18L 18,000 24L 24,000 30L 30,000 36L 36,000 48L 48,000 60L 60,000 Other lumen packages may be ordered in increments of 1000lm	835 3500K (CRI 80) 840 4000K (CRI 80) 850 5000K (CRI 80)	UNV Universal voltage 120-277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	WP6^{2,4} Wired 6' 16/3 cord & NEMA twist lock plug WP6/4⁴ Wired 6' 16/4 cord and NEMA twist lock plug for line voltage plus unswitched hot for BSL10LST WC6⁴ Wired 6' 16/3 cord WP6D^{2,4} Wired 6' 16/3 cord & NEMA twist lock plug for line voltage and wired 6' 16/3 cord and plug for dimming control WC6/4^{3,4} Wired 6' 16/4 cord for line voltage plus unswitched hot for BSL10LST WC6/5^{3,4} Wired 6' 18/5 cord for line voltage plus 0-10V dimming WC6/6^{3,4} Wired 6' 18/6 cord for line voltage plus unswitched hot for BSL10LST plus 0-10V dimming LCA Clear acrylic lens LCR Clear ribbed lens LFA Frosted acrylic lens SWZCSH^{6,8} Interact Pro scalable high bay sensor w/integral daylight & occupancy sensing, advanced grouping w/dwell time SNH200⁶ Integral EasySense occupancy & daylight sensor, with advanced SpaceWise type wireless grouping MD360⁵ 360° Motion detector (ON/OFF) MD360D⁵ 360° Motion detector (ON/DIM to 10%) BSL20B2³ Factory wired Bodine integral emergency pack, nominal 2300 to 3000 lumens (0°C - 45°C) BSL10LST³ Factory wired Philips Bodine integral emergency pack, nominal 1100 to 1400 lumens (0°C - 45°C) ER100^{9,10,11} UL924 listed sensor bypass relay, factory installed between driver & sensor (Interact Pro compatible) (0°C - 45°C) ER100/HVPS^{9,10,11} UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Sense (Interact Pro compatible) (0°C - 45°C) ER100/HVPI^{9,10,11} UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Interrupt (Interact Pro compatible) (0°C - 45°C) GTD/E^{2,9,11} UL924 listed Bodine GTD factory installed on driver input (120V or 277V only)(0°C - 45°C) SP1 Optional 10kV surge protector 55 High ambient (55°C) for 24klm and 30klm (see dimensional details for luminaire sizes) BAC¹² Meets the requirements of the Buy American Act of 1933 (BAA)

- Nominal delivered lumens at 25°C ambient
- Must specify line voltage
- Order proper cord option for dimming or emergency if using optional cords
- 6' is standard cord length. For optional 10', 15', or 20' cord length, replace the "6" in the option code with the desired length.
- Not for use with SNH200 or Interact options.
- High bay motion detector. Motion sensing zone is extremely limited if used below 15' mounting height. Consider adding LCN3120/05 battery powered sensor to the install for better coverage at lower heights.
- For areas where luminaires are subject to high impact (gymnasiums, etc), rigid pendant hanging is not suggested. Use hook or cable/chain assembly for mounting in these areas.
- Must order IRT9015 Interact commissioning remote with each system order.
- Must be installed in conjunction with a UL1008 device.
- Must be ordered with an integral sensing option.
- 30,000 lumens maximum
- Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
- Consult Signify to confirm whether specific accessories are BAA-compliant.



Accessories¹³ (order separately)

- HNH5-VHOOK** 54" chains & V hooks
- HCH5-VHOOK** 5' cables & V hooks
- HCH10-VHOOK** 10' cables & V hooks
- HCH15-VHOOK** 15' cables & V hooks
- HCH20-VHOOK** 20' cables & V hooks
- FBY-PENHGR⁷** Pendant hanger (adds 3" to height)
- FBY/FBZ-SMKIT** Surface mount bracket kit (drops fixture 6" from surface)
- FBY-WG** Wire guard (order 2 for FBY36, FBY48, & FBY60)
- FBX-SLCA-2N** Clear acrylic snap lens
- FBX-SLFA-2N** Frosted acrylic snap lens
- FBX-SLCA-2W** Clear acrylic snap lens for FBY36, FBY48, & FBY60
- FBX-SLFA-2W** Frosted acrylic snap lens for FBY36, FBY48, & FBY60



FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

General Notes

- All options factory installed.
- All accessories are field installed.
- Many luminaire components, such as reflectors, refractors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility

Application

- This luminaire can be used to illuminate retail, cold storage, manufacturing, warehousing and many other large indoor spaces with control and precision.

Construction/Finish

- Metal housing and reflectors provide excellent thermal transfer to extend component life.
- End holes to attach V hooks for chain or cable hanging.
- Cable/chain mounting capability is standard (ordered separately or furnished by others). Accessories are available for other mounting methods.
- 7/8" K.O. at each end of luminaire for wiring or motion detector.
- Polyester powder finish for excellent impact and corrosion resistance.
- LED light engines and drivers are field replaceable.

- 5 Year Limited Warranty, www.signify.com/warranties
- Components are RoHS compliant.
- L70 LED predicted lumen maintenance >100,000 hours.
- cETLus listed to UL 1598 standards. Suitable for use in damp locations. See ambient temperature data table for standard ambient information. Ambient other than listed is ordered as an option.
- Dimming drivers are standard. Control is 0-10V DC.
- Optional motion detector.
- DLC Listed. Please check the DLC Qualified Products List to confirm (www.designlights.org/QPL).
- 6KV surge protection standard.

Ambient Temperature Data

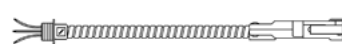
Configuration	Standard Ambient
FBY12L, FBY18L, FBY36L	-40°C to 55°C
FBY48L	-40°C to 50°C
FBY24L, FBY30L, FBY60L	-40°C to 45°C
Any battery, ER100, or GTD	0°C to 45°C

Electro-Connect Modular Wiring System

Electro-Connect is a pre-assembled modular wiring system designed to simplify the process of wiring and installing fixtures ultimately providing time and cost savings. With only three basic components, EC can be used to supply power in both high bay and low bay applications. For more information, visit us online at <https://www.signify.com/en-us/products/indoor-luminaires/modular-wiring/wiring-devices/electro-connect-ec-three> and <https://www.signify.com/en-us/products/indoor-luminaires/modular-wiring/wiring-devices/electro-connect-ec-three-plus>

EC3 Modular Wiring System

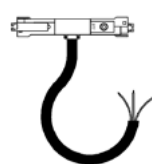
Distribution Cable



Extender Cable

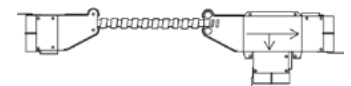


Lighting 'T'

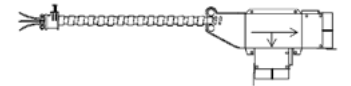


EC3+ Modular Wiring System

Double Headed Extender Cable



Double Headed Distribution Cable



Whip End Fixture Drop



FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

Wireless Controls Options

Interact Pro scalable sensor for Foundation, Advanced & Enterprise tiers (SWZCSH and an evolution of SpaceWise)

- SWZCSH is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote onsite to identify and group devices together.
 - Compatible with:
 - SWS200 wireless scene switch
 - Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
 - Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
 - LCN3110: Battery powered IP65 presence sensor, OCC sensor IA CM IP65WH
 - LCN3120: Battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit: www.interact-lighting.com/interactproscalablesystem

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SNH200 EasySense

- Philips field apps allow programming of occupancy & daylight sensing parameters and fine-tuning of light levels during installation. It can also be used for grouping of fixtures.
- Download "Philips field apps" from the Google Play Store.
- Register for the commissioning app at <http://registration.componentcloud.philips.com/appregistration/>.
- The app works on certain Android phones with NFC or IR. See Recommended Phones and the EasySense App User Manual in the download section at <http://www.usa.lighting.philips.com/products/lighting-components/easysense> and follow the "View Downloads" link to register for access to the download area. Navigate to Connected-Lighting-Components and then Philips-EasySense-Sensors to find downloads.

Emergency Options (ER100)

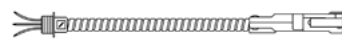
- Power Sensing (Factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output
- Power Interruption Detection (Field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output
- 347V will require step-down transformer and must be ordered indicating Power Sensing or Power Interruption Detection

Ambient Temperature Data

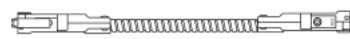
Configuration	Standard Ambient
FBY12L, FBY18L, FBY36L	-40°C to 55°C
FBY48L	-40°C to 50°C
FBY24L, FBY30L, FBY60L	-40°C to 45°C
Any battery, ER100, or GTD	0°C to 45°C

EC3 Modular Wiring System

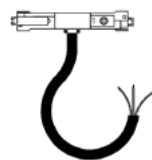
Distribution Cable



Extender Cable

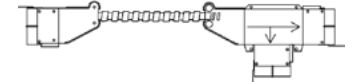


Lighting 'T'

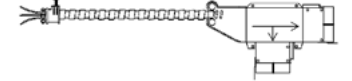


EC3+ Modular Wiring System

Double Headed Extender Cable



Double Headed Distribution Cable



Whip End Fixture Drop



FBY LED high bay

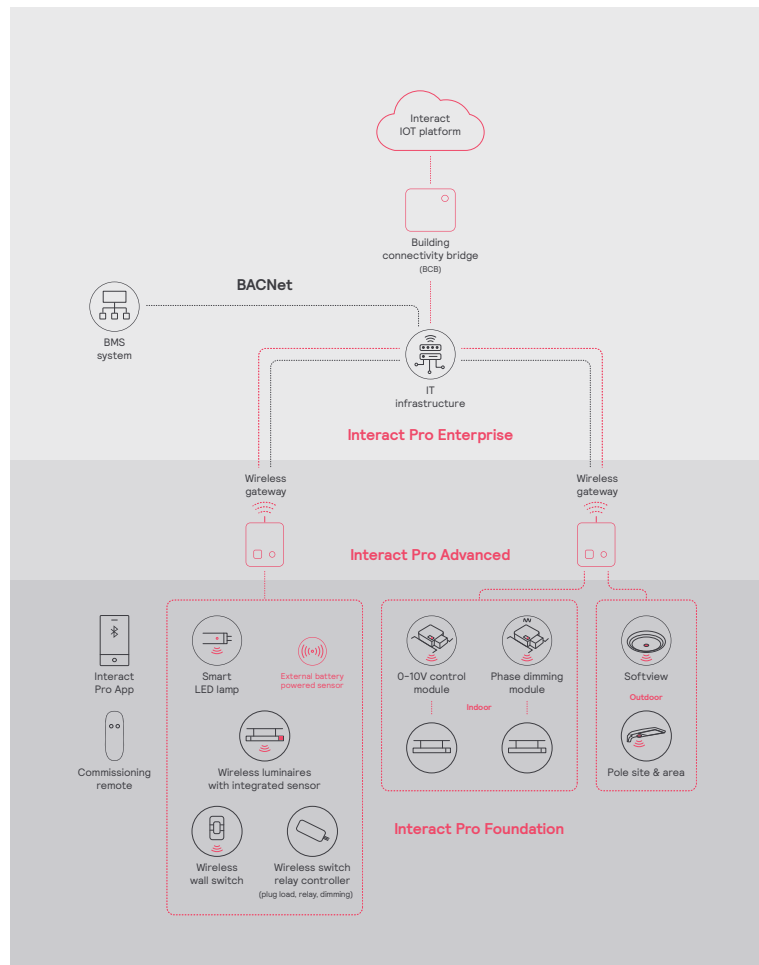
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

Interact Pro scalable system			
	Foundation	Advanced	Enterprise
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• luminaires with integrated sensors	150
• smart TLEDS	150
Total number of ZGP devices (sensors and switches)	50
• sensors	30
• switches	50
• zones and groups	64
Group level	
Recommended number of lights	40 (recommended 25)
Number of ZGP devices	5
Number of scenes	16

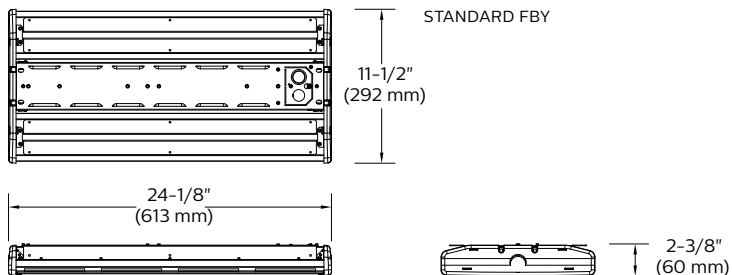


FBY LED high bay

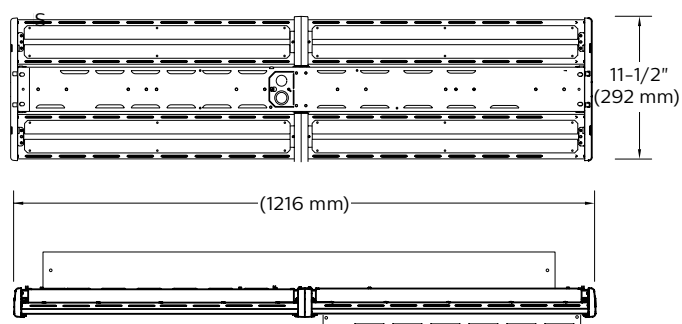
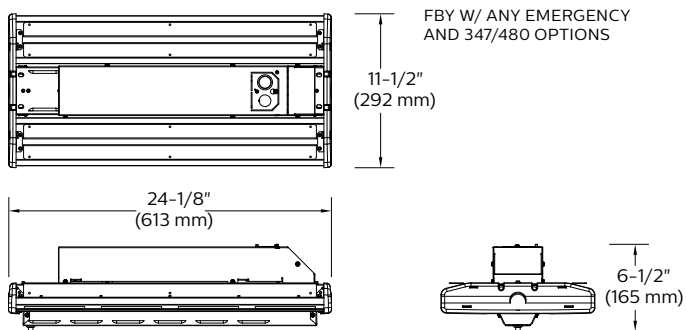
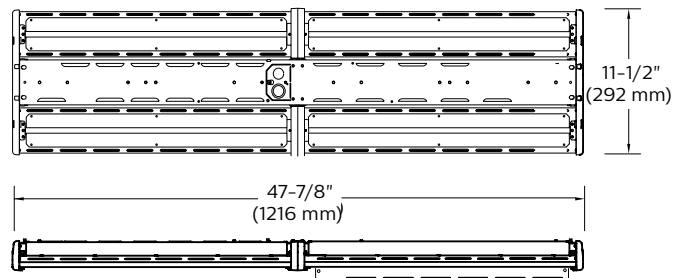
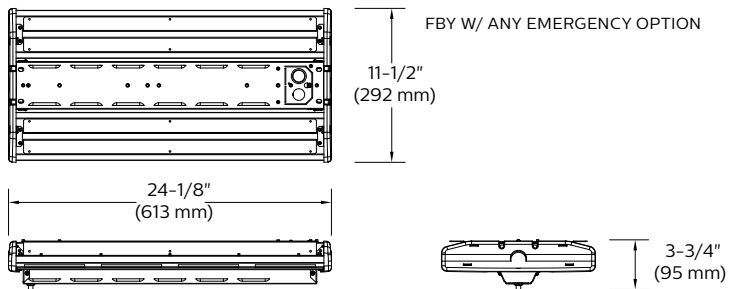
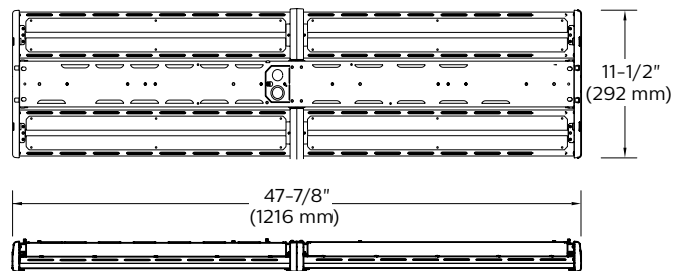
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

Dimensions

12,000lm - 30,000lm



36,000lm - 60,000lm and 24,000lm - 30,000lm 55C ambient option



FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

Photometry

LED high bay FBY, general distribution, 24,000 nominal delivered lumens

Catalog No.	FBY24L840-UNV	Candela distribution				Light Distribution			Average Luminance				
Test No.	39981	Vertical Angle	Horizontal Angle				Degrees	Lumens	% Luminaire	Angle	End	45°	Cross
S/MH	1.0		0°	45°	90°	-45°	0-30	7094	28.7	45	61608	56669	57032
Lamp Type	LED	0	9264	9264	9264	9264	0-40	11466	46.3	55	57290	48239	36303
Lumens/Lamp	24748	5	9226	9324	9359	9324	0-60	19649	79.4	65	54261	39759	35384
Input Watts	177	15	8987	9023	9017	9023	0-90	23883	96.5	75	46401	21588	24030
Efficacy	140	25	8467	8303	6893	8303	90-180	865	3.5	85	26466	18436	18481
		35	7724	6077	7031	6077							
		45	6672	6137	6177	6137							
		55	5033	4238	3189	4238							
		65	3512	2574	2290	2574							
		75	1839	856	953	856							
		85	353	246	247	246							
		95	99	94	73	94							
		105	124	107	85	107							
		115	154	137	113	137							
		125	175	155	146	155							
		135	188	169	154	169							
		145	183	176	162	176							
		155	166	162	160	162							
		165	146	152	140	152							
		175	127	128	120	128							

Comparative yearly lighting energy cost per 1000 lumens – \$1.70 based on 3000 hrs. and \$.08 pwr KWH.												
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.												
Photometric values based on test performed in compliance with LM-79.												

Coefficients of Utilization												
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)												
Ceiling (pcc)		80%			70%			50%				
Wall (pw)		70	50	30	70	50	30	50	30			
RCR		Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	118	118	118	115	115	115	109	109			
	1	109	104	100	106	102	98	97	94			
	2	99	91	85	96	89	83	85	80			
	3	91	81	73	88	79	72	75	69			
	4	83	72	63	81	70	62	67	60			
	5	77	64	56	74	63	55	60	53			
	6	71	58	49	69	57	49	55	47			
	7	66	53	44	64	52	44	50	43			
	8	61	48	40	60	47	39	46	39			
	9	57	44	36	56	43	36	42	35			
	10	54	41	33	52	40	33	39	32			

LED high bay FBY, general distribution, 24,000 nominal delivered lumens

Catalog No.	FBY24L840-UNV-LCA	Candela distribution				Light Distribution			Average Luminance				
Test No.	39993	Vertical Angle	Horizontal Angle				Degrees	Lumens	% Luminaire	Angle	End	45°	Cross
S/MH	1.1		0°	45°	90°	-45°	0-30	6984	29.7	45	59177	50287	54250
Lamp Type	LED	0	9110	9110	9110	9110	0-40	11233	47.7	55	53347	47077	34772
Lumens/Lamp	23532	5	9028	9092	9182	9092	0-60	19040	80.9	65	47445	32827	33525
Input Watts	176	15	8784	8837	8875	8837	0-90	22761	96.7	75	34002	22618	18791
Efficacy	133	25	8252	8197	7032	8197	90-180	771	3.3	85	17589	18795	19185
		35	7487	6221	6508	6221							
		45	6409	5446	5875	5446							
		55	4687	4136	3055	4136							
		65	3071	2125	2170	2125							
		75	1348	897	745	897							
		85	235	251	256	251							
		95	114	72	47	72							
		105	126	82	56	82							
		115	136	107	81	107							
		125	150	131	113	131							
		135	160	149	127	149							
		145	155	166	148	166							
		155	135	191	159	191							
		165	116	191	220	191							
		175	98	102	96	102							

Comparative yearly lighting energy cost per 1000 lumens – \$1.79 based on 3000 hrs. and \$.08 pwr KWH.												
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.												
Photometric values based on test performed in compliance with LM-79.												

Coefficients of Utilization												
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)												
Ceiling (pcc)		80%			70%			50%				
Wall (pw)		70	50	30	70	50	30	50	30			
RCR		Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	118	118	118	115	115	115	109	109			
	1	109	104	101	106	102	98	97	94			
	2	100	92	86	97	90	84	86	81			
	3	91	81	74	89	79	72	76	70			
	4	84	72	64	81	70	63	68	61			
	5	77	65	56	75	64	56	61	54			
	6	71	59	50	69	58	49	55	48			
	7	66	53	45	64	52	44	51	43			
	8	62	49	40	60	48	40	46	39			
	9	58	45	37	56	44	36	43	36			
	10	54	41	34	53	41	33	40	33			

FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

Photometry (continued)

LED high bay FBY, general distribution, 24,000 nominal delivered lumens, frosted acrylic lens

		Candela distribution				Light Distribution			Average Luminance				
		Vertical Angle	Horizontal Angle				Degrees	Lumens	% Luminaire	Angle	End	45°	Cross
		0°	45°	90°	-45°	0-30			45				
Catalog No.	FBY24L840-UNV-LFA	0	8355	8355	8355	8355	6258	28.4	45	42919	43907	45150	
Test No.	39991	5	8277	8334	8374	8334	10031	45.5	55	39758	41537	38779	
S/MH	1.2	15	7910	7855	7834	7855	16828	76.3	65	35977	36034	35599	
Lamp Type	LED	25	7187	7053	6984	7053	20948	95.0	75	31825	31863	31706	
Lumens/Lamp	22055	35	6171	6008	6120	6008	1107	5.0	85	25635	28174	28384	
Input Watts	176	45	4648	4755	4890	4755	22055	100.0					
Efficacy	125	55	3493	3649	3407	3649							
		65	2329	2333	2304	2333							
		75	1262	1263	1257	1263							
		85	342	376	379	376							
		95	124	96	76	96							
		105	195	105	82	105							
		115	263	133	104	133							
		125	315	158	135	158							
		135	340	190	152	190							
		145	334	227	185	227							
		155	305	275	224	275							
		165	277	292	281	292							
		175	254	256	250	256							

Coefficients of Utilization									
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
Ceiling (pcc)		80%			70%			50%	
Wall (pw)		70	50	30	70	50	30	50	30
RCR		Zonal cavity method - Effective floor reflectance = 20%							
Room Cavity Ratio	0	118	118	118	115	115	115	108	108
	1	108	103	99	105	100	97	95	92
	2	98	90	84	95	88	82	84	79
	3	90	80	72	87	78	70	74	68
	4	82	71	62	80	69	61	66	59
	5	76	63	55	74	62	54	59	52
	6	70	57	49	68	56	48	54	46
	7	65	52	43	63	51	43	49	42
	8	61	48	39	59	47	39	45	38
	9	57	44	36	55	43	35	41	34
10	53	40	33	52	40	32	38	32	

Catalog No.	Delivered Lumens	Input Watts *	Efficacy	Uplight%
FBY12L840-UNV	12139	88	138	2.7
FBY12L840-UNV-LCA	11689	88	133	3.5
FBY12L840-UNV-LFA	11085	88	126	5.6
FBY18L840-UNV	18797	133	142	2.4
FBY18L840-UNV-LCA	18037	133	136	3.4
FBY18L840-UNV-LFA	16889	133	127	5.1
FBY24L840-UNV	24748	177	140	3.5
FBY24L840-UNV-LCA	23532	176	133	3.3
FBY24L840-UNV-LFA	22055	176	125	5.0
FBY30L840-UNV	30435	208	146	2.3
FBY30L840-UNV-LCA	29316	209	140	4.0
FBY30L840-UNV-LFA	27578	208	132	4.6
FBY36L840-UNV	39683	268	148	2.6
FBY36L840-UNV-LCA	37844	267	142	3.5
FBY36L840-UNV-LFA	35176	269	131	5.1
FBY48L840-UNV	50849	356	143	2.7
FBY48L840-UNV-LCA	48521	355	137	3.5
FBY48L840-UNV-LFA	45050	355	127	5.1
FBY60L840-UNV	62499	423	148	2.7
FBY60L840-UNV-LCA	59257	420	141	3.5
FBY60L840-UNV-LFA	55837	421	133	3.9

* 347V and 480V models have the same input watts.



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